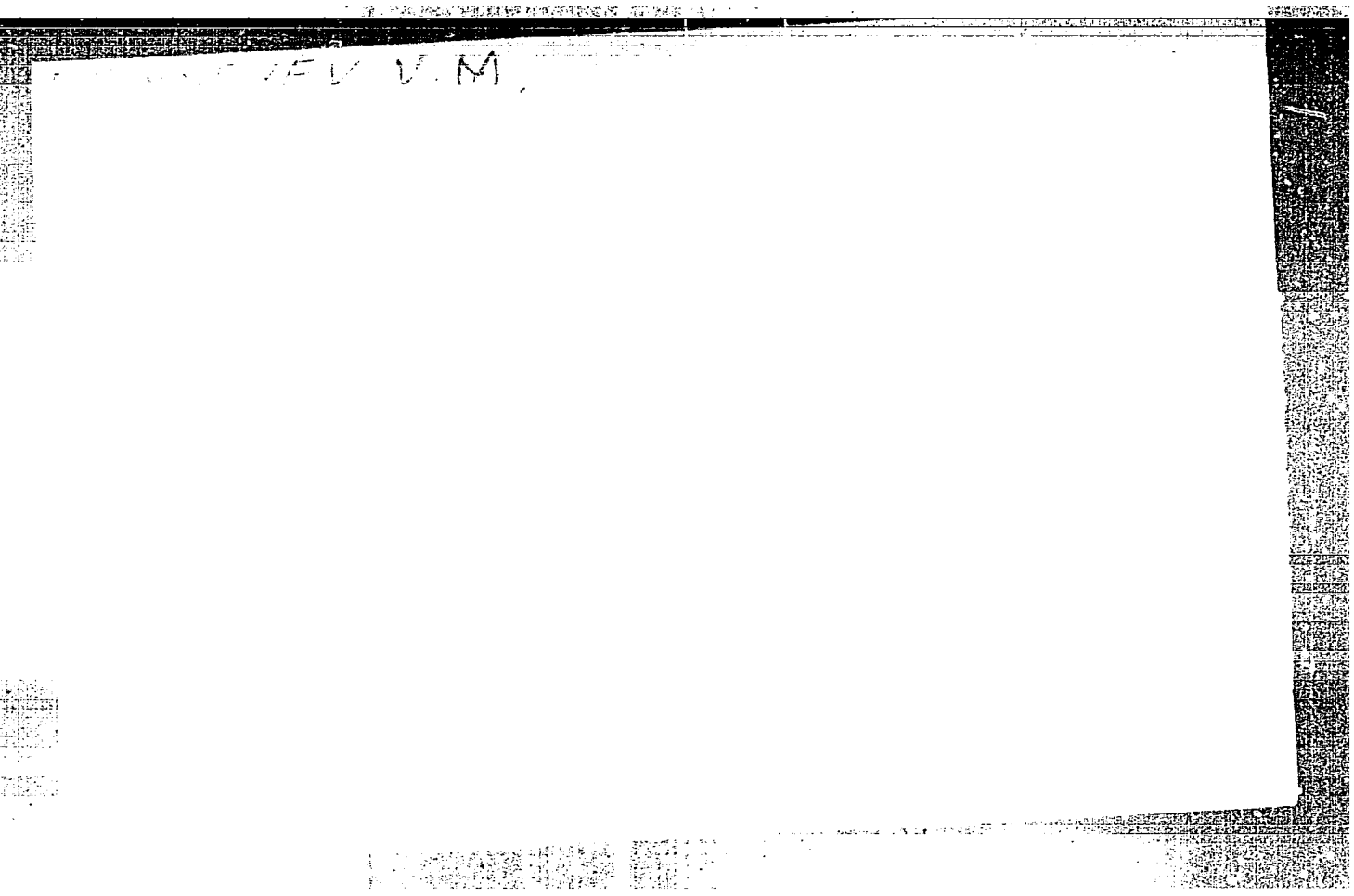

SILAYEV, A.B.; NESMEYANOV, An.N.; FEDOSEYEV, V.M.; KONDAKOVA, N.V.

Synthesis of α,β-dimercaptopropionoic acid, containing radioactive sulphur. Zhur.ob.khim. 27 no.10:2871-2873 O '57. (MIRA 11:4)

1.Moskovskiy gosudarstvennyy universitet.
(Propionoic acid) (Tracers (Biology))

Fedoseyev V.M

21(8) 5(0)

AUTHOR: Lapitskiy, A.V. SOV/55-59-3-29/32

TITLE: The First All-Union Conference of Universities and Colleges on Radiochemistry

PERIODICAL: Vestnik Moskovskogo universiteta. Seriya matematiki, mekhaniki, astronomii, fiziki, khimii, 1959, Nr 3, pp 221-223 (USSR)

ABSTRACT: This conference was convened by the initiative of the Laboratoriya radiokhimii khimicheskogo fakul'teta MGU (Laboratory of Radiochemistry of the Department of Chemistry of Moscow State University) and was held in Moscow from April 20 to April 25, 1959. It was attended by professors, teachers, and scientific collaborators of 32 universities and colleges of the Soviet Union. In his opening address, An.N.Nesmeyanov, Doctor of Chemical Sciences, stressed the importance of radiochemistry. 90 lectures were delivered by members of Moscow State University: Laboratoriya yadernoy fiziki (Laboratory of Nuclear Physics) J.P.Aulenko, A.I.Sevast'yanov: Production of Beryllium-7 by the Reaction (T,2n): I.Starý, N.P.Rudenko: Production of Radioactive Isotopes by Extraction as β-Diketonates. Laboratoriya radiokhimii (Laboratory of Radiochemistry): An.N. Nesmeyanov, B.M. Korolev, L.A.Sazonov: Separation of Radioactive Isotopes in the Irradiation of Colloids; An.N.Nesmeyanov, Ya.A.Borisov, E.S.Filatov, V.Kondratenko, Chzhan Tszya-syan, K.Panek, B.Shukla: Secondary Reactions of the Recoil Atoms ^{80}Br and ^{82}Br in Methyl Bromides; B.G.Dzantiyev, I.M.Barkalov, V.V.Khrapov: Reactions of "Hot" Sulfur- and Nitrogen Atoms With Hydrocarbons; B.Z.Iofa, L.V.Bobrov, A.N.Ratov: The State of Radioactive Isotopes in Extremely Dilute Solutions; M.S. Merkulova, I.V.Melikhov: General Theory of the Coprecipitation of Radioactive Elements With Non-isomorphous Crystalline Precipitates; A.V.Lapitskiy, I.A.Savich, Chzhuan Ye-syu: Coprecipitation of Protactinium With Complex Compounds of Ti, Nb, and Ta; V.M.Fedoseyev, V.V.Ivanenkov, V.N.Bochkarev: Application of Radioactive Paper Chromatography"; K.B. Zaborenko, A.M.Babeshkin, M.S.Kul'chenko: Accumulation and Separation of Recoil Atoms on the Basis of the Example Ra^{224} and Ra^{228}; K.B.Zaborenko, A.M.Babeshkin, V.A.Beyevskaya, L.L.Melikhov: Application of the Emanation Method for the

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Card 2/4

Investigation of the Transformation of Solids; V.I.Spitsyn, K.B.Zaborenko, A.M.Babeshkin, M.A.Radicheva: Transformation of Heteropoly-compounds; K.B.Zaborenko, A.M.Babeshkin, L.L. Kovalenko: Geochemistry of Radium; K.B.Zaborenko, V.I. Korobkov: Microanalytical Determination of Uranium by Means of Nuclear Emulsions. An.N.Nesmeyanov, Le Dyk-Nam: Partial Vapor Pressure of Co in Alloys With Ni; Yu.A.Priselkov, Yu.A. Sapozhnikov, A.V.Tseplyayeva, V.V.Karelin: The Behavior of a Molecular Metal Beam in the High-frequency Field; I.V.Golubtsov, A.V.Lapitskiy, V.K.Shiryayev: Vapor Pressure of Niobium Dioxide; I.V.Golubtsov, Yu.A.Likhachev, Ye.K.Bakov: Various Constructions of the Scintillation Attachment to the Apparatus of the Type B. Kafedra analiticheskoy khimii (Chair of Analytical Chemistry): I.P.Alimarin, N.P.Borzenkova: Niobium^{95} as a Radioactive Tracer; I.P.Alimarin, T.A.Belyavskaya, Wu Bin-yen': Sorption of Zr by Ion Exchangers; A.I.Busev, V.M. Byr'ko: The Use of Complex Pyrazolinedithiocarbamates in Radiometry. Kafedra neorganicheskoy khimii (Chair of Inorganic Chemistry): Ye.A.Ippolitova, Yu.P.Simanov, L.M.Kovba, G.P. Polunina, I.A.Berezhnikova: Uranates of Some Bivalent Metals; V.G.Knyagina, G.G. Nezkova: Uranium Compounds With Acids of Low-valence P; V.I. Spitsyn: The Influence of the Radioactive Radiation of Solids on Their Physico-chemical Properties; I.Ye.Mikhaylenko, V.I.Spitsyn: Isotope Exchange in the System $K_2SO_4 - SO_3$ at High Temperature. Kafedra khimicheskoy kinetiki (Chair of Chemical Kinetics): I.V.Berezin, V.L.Antonovskiy, N.F.Kazanskaya: Application of Tritium for the Purpose of Determining the Velocity Constants of the Separation of Organo-hydrogen Compounds. An.N.Nesmeyanov delivered a detailed lecture on the Methodology of Radiochemical Instruction at the chemical departments of universities.

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5(3) SOV/79-29-5-63/75

AUTHORS: Fedoseyev, V. M., Kovalenko, S. P., Silayev, A. B., Nesmeyanov, An. N.

TITLE: S-Derivatives of Thiourea (S-proizvodnyye tiomocheviny). 1. Synthesis of N-Acetyl- and N,N-Diethyl-2,3-diisothiuronium Propyl Amine (1. Sintez N-atsetil- i N,N-dietil-2,3-diizotiuroniypropilamina)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 5, pp 1703-1707 (USSR)

ABSTRACT: Two new S-derivatives of thiourea were produced: dibromide of bromine hydrate of N,N-diethyl-2,3-diisothiuronium propyl amine and dibromide of N-acetyl-2,3-diisothiuronium propyl amine. The course of the synthesis and the values of the elementary analysis are given. The synthesis was controlled by paper chromatography; furthermore, it was repeated with marked atoms (S^{35}). The reaction between 2,3-dibromopropyl amine and thiourea in butanol solution at 80° does not lead to the formation of dibromide of the bromine hydrate of 2,3-diisothiuronium propyl amine. Bromide of the bromine hydrate of 2-amino-5-isothiuronium methyl thiazoline is probably formed in this connection. There are 1 table and

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SOV/79-29-5-63/75

S-Derivatives of Thiourea. 1. Synthesis of N-Acetyl- and N,N-Diethyl-2,3-diisothiuronium Propyl Amine

11 references, 1 of which is Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet
(Moscow State University)

SUBMITTED: February 6, 1958

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S/153/60/003/003/024/036/XX
B016/B058

AUTHORS: Fedoseyev, V. M., Ivanenkov, V. V., Bochkarev, V. N.

TITLE: Using the Method of Paper Radiochromatography for Studying the Reciprocal Action of Some Organic Bromides With Thiourea

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya tekhnologiya, 1960, Vol. 3, No. 3, pp. 484 - 488

TEXT: The authors report on the use of paper radiochromatography for studying the reaction of thiourea with 2,3-dibromo propyl amine (DBPA) and its N-derivatives. As previously proved by them (Ref.5), corresponding diisothiourea derivatives (I) form in this case. Such a compound is, of course, unstable as a free amine and is completely transformed into 2-imino-5-isothioureamethyl-thiazole. It further turned out that ring formation is not prevented by the substitution of a hydrogen atom in the amino group of DBPA. Corresponding 2-imino-3-alkyl-5-isothioureamethyl-thiazoles (II) were formed there as reaction products. Even at

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Using the Method of Paper Radiochromatography for Studying the Reciprocal Action of Some Organic Bromides With Thiourea

S/153/60/003/003/024/036/XX
B016/B058

a long lasting reciprocal action with a great excess of thiourea, dibromo-propyl-phthalimide produces a reaction product, in which only one bromine atom is substituted by the isothiourea group: 2-bromo-3-isothiourea-propyl-phthalimide (III). By using thiourea, tagged at the sulfur, in the radiochromatographic analysis, the authors succeeded in determining the following details: 1) The degree at which thiourea enters into the reaction. As may be seen from Fig.2, thiourea reacts most strongly with N,N-diethyl-dibromo-propyl amine, the reaction setting in immediately after mixing the reagents. The reaction with dibromo-propyl-phthalimide proceeds much more slowly. 2) The proof of the dependence of the reaction rate on the structure of the amine used. From experiments with N-ethyl-, N-propyl-, N-butyl-, and not substituted DBPA (Fig.3), the authors conclude that the reaction rate rapidly increases with the rising number of the carbon atoms in the alkyl radical up to three. The reaction rate drops at a further extension of the carbon chain. The authors are not yet able to interpret this phenomenon. 3) The determination of the temperature of the reaction medium. The influence of the temperature on the reaction rate was proved with the

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Using the Method of Paper Radiochromatography for Studying the Reciprocal Action of Some Organic Bromides With Thiourea

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example of N-propyl-dibromo-propyl-amine in methyl-, ethyl-, isobutyl-, and isoamyl-alcohol. 2-imino-3-propyl-5-isothiourea-methyl-thiazole formed in all cases, but with different rate. The authors conclude from Fig.4 that thiourea was completely reacted in isoamyl-alcohol within 30 min, while this was achieved in isobutyl-alcohol only after 2 hrs. The course of reaction in methyl- and ethyl-alcohol is practically the same, but much slower than in the former two alcohols. Fig.1 shows the distribution of activity between thiourea and the reaction product in isobutyl-alcohol. Curve A illustrates the measurements by means of the instrument of the type Б (B), while curve Б was automatically recorded by the instrument "Бамбук" (Bambuk) on the diagram strip of the self-recording potentiometer "КВ" (KV). The authors recommend the radiochromatographic analysis for studying the kinetics of organic reactions, for identification and quantitative determination of products of neutron irradiation as well as for investigating the reaction of isotope exchange of organic and inorganic compounds. This paper was presented at the First Inter-University Conference on Radiochemistry, held in Moscow from April 20 to 25, 1958. There are 4 figures and 5 references:

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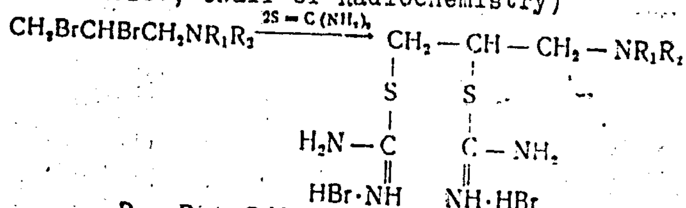
Using the Method of Paper Radiochromatography for Studying the Reciprocal Action of Some Organic Bromides With Thiourea.

S/153/60/003/003/024/036/XX
B016/B058

1 Soviet, 1 US, 1 British, and 1 French.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova; Kafedra radiokhimii (Moscow State University imeni M. V. Lomonosov; Chair of Radiochemistry)

CT, 1960 N.3 p.484



(I)

$R_1 = R_2 = C_2H_5$; $R_1 = H$; $R_2 = CH_3CO$

(I)

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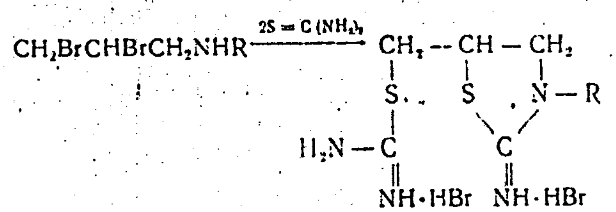
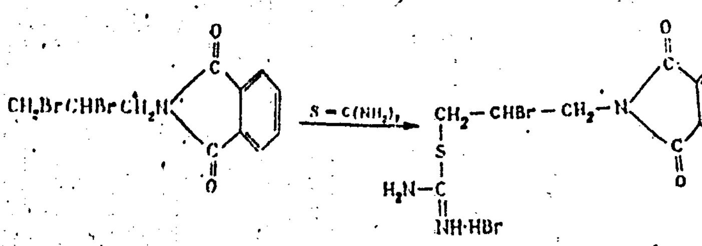
S/153/60/003/003/024/036/XX
B016/B058



(II)

R=H, C_2H_5, C_3H_7, н-C_4H_9, i-C_4H_9, н-C_5H_{11}, i-C_5H_{11}



(III)

Card 5/5

SHIROKOV, Yu.G.; FEDOSEYEV, V.M. (Moskva)

Some problems concerning the distribution and excretion of trichlor-benzenethiol. Gig. truda i prof. zab. 4 no.12:31-35 D '60. (MIRA 15:3)

1. Institut gigiyeny truda i professional'nykh zabolevaniy AMN SSSR i Moskovskiy gosudarstvennyy universitet.
(BENZENETHIOL--TOXICOLOGY)

SHAPIRO, N.I.; TOLKACHEVA, Ya.N.; SPASSKAYA, I.G.; FEDOSEYEV, V.M.

Experimental study on the possibility of utilizing protective substances in radiotherapy of malignant tumors. Vop.onk. 6 no.1:71-79 '60. (MIRA 13:10)
(CANCER) (THIOUREA) (X RAYS--THERAPEUTIC USE)

FEDOSEYEV, V.M.; BOCHKAREV, V.N.; SILAYEV, A.B.

S-Derivatives of thiourea. Part 3: Reaction of thiourea with N-(2,3-dibromopropyl) phthalimide. Zhur. ob. khim. 30 no.11: 3795-3798 N'60. (MIRA 13:11)

1. Moskovskiy gosudarstvennyy universitet.
(Urea) (Phthalimide)

SHASHKOV, V.S.; FEDOSEYEV, V.M.

Antiradiation activity of new isothiuronium derivatives. Med. rad. no.7:25-29 '61. (MIRA 15:1)
(RADIATION PROTECTION) (ISOTHIURONIUM COMPOUNDS)

SILAYEV, A.B.; FEDOSEYEV, V.M.; VASILEVSKIY, V.L.

Reactions of thiourea with N-(α-bromoacyl)-amino acids. Part 1: Reactions of thiourea with N-(α-bromobutyryl)-glycine in ethyl alcohol. Zhur.ob.khim. 30 no.10:3464-3468 O '61. (MIRA 14:4)

1. Moskovskiy gosudarstvennyy universitet.
(Urea) (Glycine)

FEDOSEYEV, V.M.; IVANENKOV, V.V.; SILAYEV, A.B.

S-derivatives of thiourea. Part 2: Synthesis of 2-imino-3-alkyl-5-isothiuroniummethylthiazolidines. Zhur.ob.khim. 30 no.10:3468-3472 O '61. (MIRA 14:4)

1. Moskovskiy gosudarstvennyy universitet.
(Isothiuronium compounds) (Thiazolidine)

FEDOSEYEV, V.M.; BOCHKAREV, V.N.; SILAYEV, A.B.

Derivatives of thiourea. Part 4: Preparation of 2-bromo-3-isothiuronium propylamine and study of some of its transformations. Zhur.ob.khim. 31 no.12:3929-3933 D '61. (MIRA 15:2)

1. Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova.
(Pseudourea)

FEDOSEYEV, V.M.; ZAVADA, M.; SILAYEV, A.B.

8 derivatives of thiourea. Part 5: Reaction of thiourea with α,β-dibromopropionic acid. Zhur.ob.khim. 32 no.10:3425-3432 O '62. (MIRA 15:11)

1. Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova.

(Urea)
(Propionic acid)

VASILEVSKIY, V.L.; FEDOSEYEV, V.M.; SILAYEV, A.B.

Interaction of thiourea with N-(α-bromoacyl)-amino acids. Part 2: Reaction of thiourea with N-(α-bromobuturyl)-glycine in dimethylformamide. Zhur.ob.khim. 32 no.7:2269-2273 Jl '62. (MIRA 15:7)

1. Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova.
(Urea) (Glycine)

FEDOSEYEV, V.M.; SIMONOV, Ye.F.; SILAYEV, A.B.

Synthesis of 2,3-dimercaptopropanol ethers. Zhur.ob.khim. 32 no.9:3083-3088 S '62. (MIRA 15:9)

1. Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova.
(Propanol) (Ethers)

FEDOSEYEV, V.M.; SULIMA, A.V.; SILAYEV, A.B.

S derivatives of thiourea. Part 6. 2,3-Di(isothiuronium bromide)-propanol and its ethers. Zhur.ob.khim. 32 no.10:3432-3439 O '62. (MIRA 15:11)

1. Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova.

(Pseudourea) (Propanol)

FEDOSEYEV, V.M.; IVANENKOV, V.V.; SILAYEV, A.B.

S-derivatives of thiourea. Part 7: Reaction of thiourea with N-isopropyl-2,3-dibromopropylamine. Zhur.ob.khim. 33 no.3:1026-1031 Mr '63. (MIRA 16:3)

1. Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova.

(Urea)
(Propylamine)

VASILEVSKIY, V.L.; SVERDLOV, Ye.D.; FEDOSEYEV, V.M.; SILAYEV, A.B.

Interaction of thiourea with α-bromobutyric acid. Part 1: Effect of solvents on the reaction rate. Zhur.ob.khim. 33 no.7: 2397-2401 Jl '63. (MIRA 16:8)

1. Moskovskiy gosudarstvennyy universitet.
(Urea) (Solvents) (Butyric acid)

SVERDLOV, Ye.D.; VASILEVSKIY, V.L.; FEDOSEYEV, V.M.; SILAYEV, A.B.

Reaction of thiourea with α-bromobutyric acid. Part 2: Characteristics of the reaction taking place at low concentrations of initial substances. Zhur.ob.khim. 33 no.10: 3373-3378 O '63. (MIRA 16:11)

1. Moskovskiy gosudarstvenny/ universitet imeni M.V.Lomonosova.

FEDOSEYEV, V.M.; TARASENKO, A.G.; MRAZEK, L.; SILAYEV, A.B.

Synthesis of 2,3-dimercaptopropylamine and its N-mono- and N,N'-dialkyl derivatives. Dokl.AN SSSR 148 no.4:871-874 F '63. (MIRA 16:4)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova. Predstavleno akademikom A.N.Nesmeyanovym.
(Propylamine)

ACCESSION NR: AP4027969 S/0205/64/004/002/0216/0220

AUTHOR: Konstantinova, M. M.; Tarasenko, A. G.; Fedoseyev, V. M.

TITLE: Investigation of the antiradiation activity of N-alkyl derivatives of 2,3-dimercaptopropylamine and their action mechanism

SOURCE: Radiobiologiya, v. 4, no. 2, 1964, 216-220

TOPIC TAGS: radioprotective action mechanism, dithiol group, N-alkyl derivative, 2,3-dimercaptopropylamine, synthetic N-alkyl derivative, oxygen intensity, tissue hypoxia, dithiol radioprotective action, mercapto, gamma radiation, lethal dose, radiation sickness, increased radioresistance

ABSTRACT: This study investigates the N-alkyl derivatives of 2,3-dimercaptopropylamine, there being little data in the literature on the radioprotective action of substances containing sulfur, especially the dithiol groups. These derivatives, synthesized for the first time by the authors, were studied in relation to their effect on oxygen intensity in the tissues. Experimental white mice were gamma-irradiated (Co^{60}, 270-280 r/min) with single 900-r doses

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ACCESSION NR: AP4027969

(LD 100/15). The following preparations were administered to the animals 15, 30, 60, or 90 min before irradiation: 2,3-dimercaptopropylamine and N-ethyl-, N-propyl-, N-butyl-, N,N-diethyl-, N,N-dipropyl-, and N,N-dibutyl-2,3-dimercaptopropylamine. Survival rates and average lifetimes of animals were determined for the 30-day period following irradiation. Oxygen intensity in spleen tissues was measured by a polarographic method. Findings show that all the investigated dithiols are radioprotective and increase animal survival in some cases by as much as 60-80%. Preparations are found to be most effective when administered 60 min before irradiation, with some exceptions. The radioprotective action mechanism of this dithiol group is related to tissue hypoxia. However, the correlation between increased radioresistance and decreased oxygen intensity in spleen tissues is less markedly expressed than in the case of biological amines. The radioprotective action of dithiols appears to be based on some other mechanism in addition to hypoxic effect. "The authors express their gratitude to I. V. Nekrasova and O. M. Sokolova for assistance in carrying out the experimental study." Orig. art. has: 2 tables, 2 figures.

ASSOCIATION: Institute morfologii zhivotnkh im. A. N. Severtsova, AN SSR, Moscow (Institute of Animal Morphology AN SSSR); Moskovskiy gosudarstvenny*y universitet im. M. V. Lomonosova (Moscow State University).

Card 2/3

FEDOSEYEV, V.M.; LITVINOV, L.N.

S-derivatives of thiourea. Part 8: Synthesis of 2-hydroxy-5-isothiouroniummethylthiazoline. Zhur.ob.khim. 34 no.2:557-560 F '64. (MIRA 17:3)

1. Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova.

TARASENKO, A.G.; FEDOSEYEV, V.M.; SILAYEV, A.B.

2,3-Dimercaptopropylamine and its derivatives. Part 1: Synthesis of N-mono- and N,N-dialkyl derivatives of 2,3-dimercaptopropylamine. Zhur. ob. khim. 34 no. 3 1009-1014 Mr '64. (MIRA 17:6)

1. Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova.

FEDOSEYEV, V.M.; YEVDOKIMOV, Yu.M.

S-derivatives of thiourea. Part 9: Synthesis of 2-alkyl(aryl)-and 2-dialkylamino-5-(isothiuronium bromide)-methyl-Δ^2 thiazoline hydrobromides. Zhur. ob. khim. 34 no. 5:1551-1556 My '64. (MIRA 17:7)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.

FEDOSEYEV, V.M.; FILIPPOVICH, I.V.

S-derivatives of thiourea. Part 10: Preparation of 2-amino-5-bromo-Δ^{4}-dihydro-1,3-thiazine. Zhur. ob.khim. 34 no. 5:1556-1561 My '64.

S-derivatives of thiourea. Part 11: Product of the reaction of 2,3-dibromopropylamine hydrobromides with potassium thiocyanate. Ibid.:1561-1565 (MIRA 17:7)

1. Moskovskiy gosudarstvennyy universitet.

SHASHKOV, V.S.; SAKSONOV, P.P.; ANTIPOV, V.V.; MOROZOV, V.S.; MURIN, G.F.; RAZGOVOROV, B.L.; SUVOROV, N.N.; FEDOSEYEV, V.M.

Efficiency of a pharmacochemical protection against gamma irradiation and irradiation by protons with an energy 660 and 120 Mev. Kosm. issl. 2 no.4:641-647 Jl-Ag '64. (MIRA 17:9)

KONSTANTINOVA, M.M.; TARASENKO, A.G.; FEDOSEYEV, V.M.

Study of the radioprotective activity of N-alkyl derivatives of 2,3-dimercaptopropylamine and the mechanism of their action. Radiobiologiia 4 no.2:216-220 '64. (MIRA 18:3)

1. Institut morfologii zhivotnykh imeni Severtsova AN SSSR, Moskva i Moskovskiy gosudarstvennyy universitet imeni Lomonosova.

SHASHKOV, V.S.; FEDOSEYEV, V.M.; BURKOVSKAYA, T.Ye.; SAKSONOV, P.P.; ANTIPOV, V.V.; YEVDOKIMOV, Yu.N.

Study of the radioprotective activity of some newly synthesized thiazoline derivatives. Radiobiologiia 4 no.6:927 '64. (MIRA 18:7)

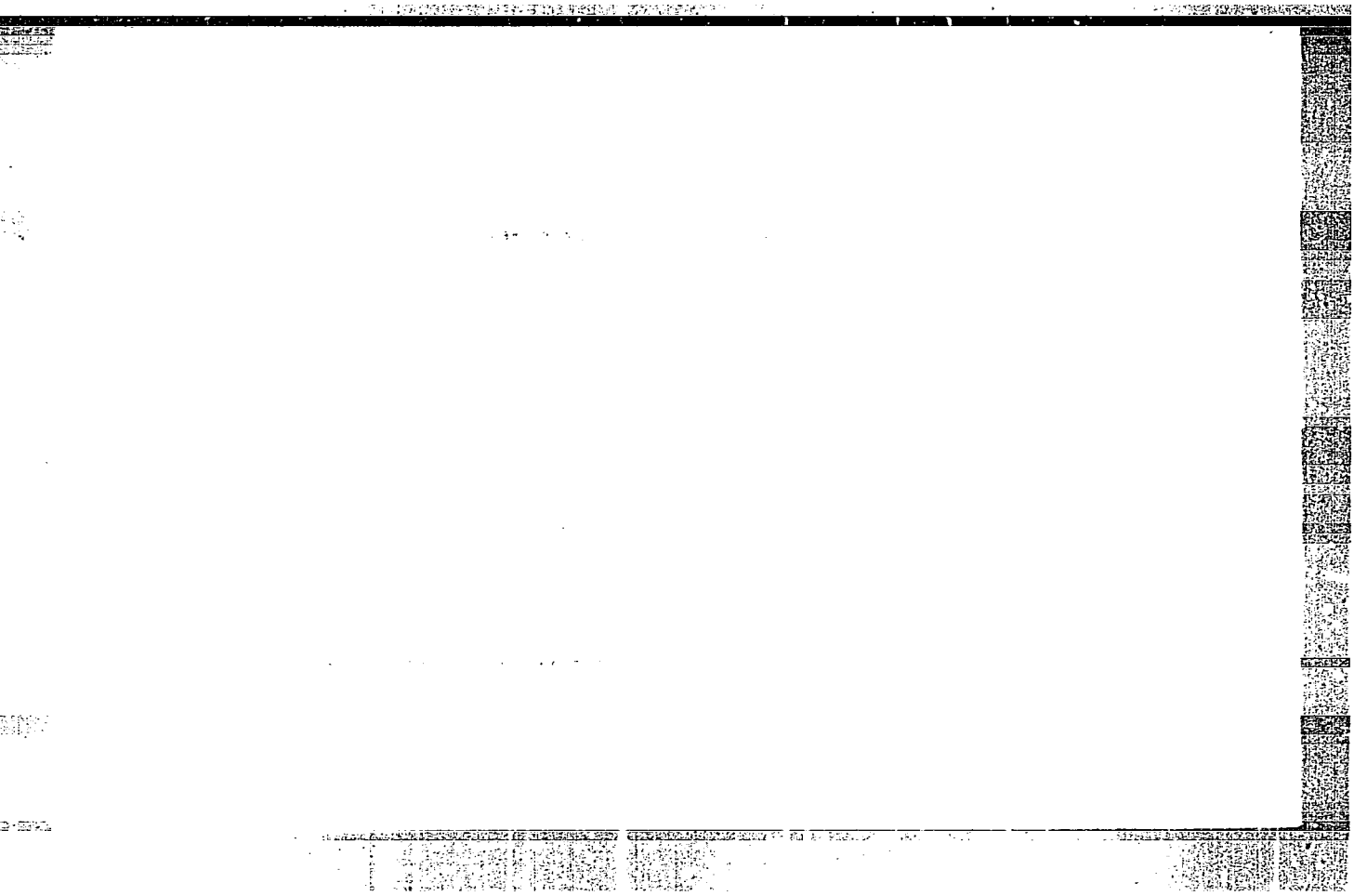
1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova, khimicheskiy fakul'tet.

ZUBOVA, O.V.; FEDOSEYEV, V.M.; SILAYEV, A.B.

Study of the antitumor activity of some derivatives of 2,3-di (isothiuronium)-propanol and 2-imino-5-(isothiuronium)-methyl-thiazolidine. Vop. onk. 10 no.1:26-28 '64.

(MIRA 17:11)

1. Iz laboratorii antibiotikov biologo-pochvennogo fakul'teta (zav. - dotsent A.B. Silayev) i kafedry radiokhimii khimicheskogo fakul'teta (zav. - prof. A.N. Nesmeyanov) Moskovskogo gosudarstvennogo universiteta. Adres avtorov: Moskva, Moskovskiy universitet, Leninskiye gory, laboratoriya antibiotikov biologo-pochvennogo fakul'teta.



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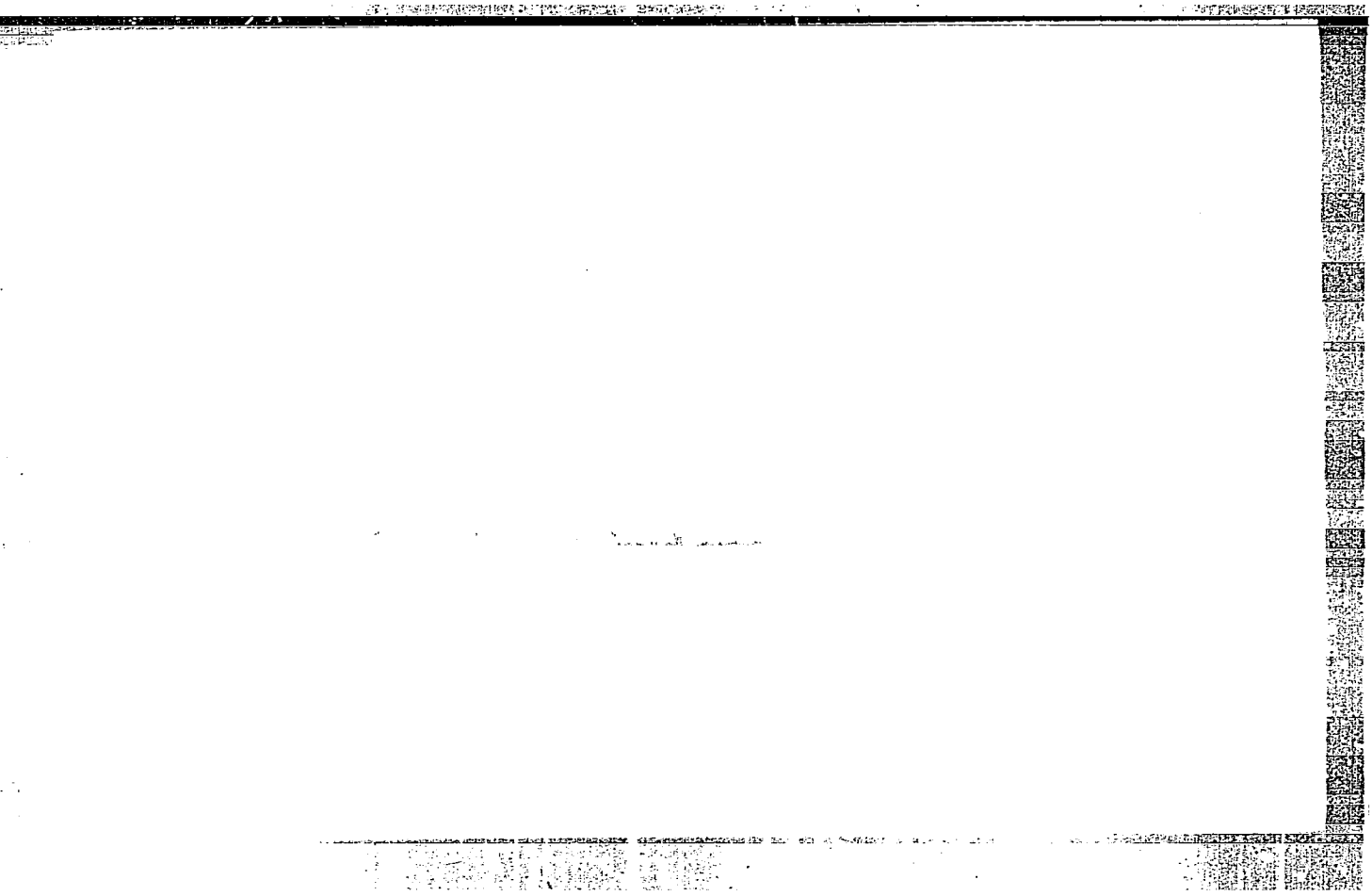

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VASILEVSKIY, V.L.; LEBEDEVA, T.A.; FEDOSEYEV, V.M.; SILAYEV, A.B.

Reaction of thiourea with β-halopropionic acids. Zhur. ob. khim. 35 no.3:479-481 Mr '65. (MIRA 18:4)

1. Moskovskiy gosudarstvennyy universitet.

YARMONENKO, S.P.; KONOPLYANNIKOV, A.G.; SUVOROV, N.N.; FEDOSEYEV, V.M.

Effect of protectors in irradiation with sublethal doses. Dokl. AN SSSR 162 no.1:205-207 My '65. (MIRA 18:5)

1. Institut gigiyeny truda i professional'nykh zabolevaniy AMN SSSR; Moskovskiy gosudarstvennyy universitet i Vsesoyuznyy khimiko-farmatsevticheskiy institut im. S.Ordzhonikidze. Submitted January 21, 1965.

SHASHKOV, V.S.; FEDOSEYEV, V.M.; BURKOVSKAYA, T.Ye.; SAKSONOV, P.P.; ANTIPOV, V.V.; YEVDOKIMOV, Yu.N.

Tests of newly synthesized thiazoline derivatives for radiation-protective activity. Farm. i toksl. 28 no.6:737-738 N-D '65. (MIRA 19:1)

ACC NR: AP6031590 SOURCE CODE: UR/0189/66/000/003/0075/0078

AUTHOR: Tarasenko, A. G.; Fedoseyev, V. M.

ORG: Organic Chemistry Department (Kafedra organicheskoy khimii)

TITLE: Determination of the ionization constants of 1,2-dimercaptorpopionic acid

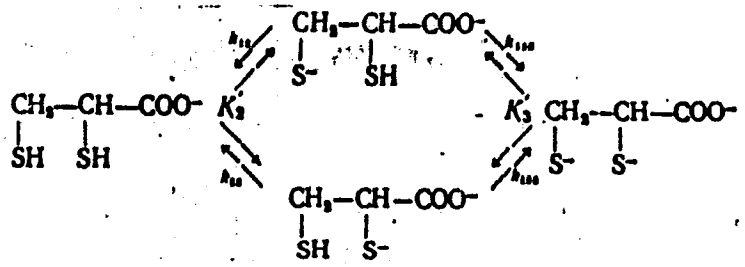
SOURCE: Moscow. Universitet. Vestnik. Seriya II. Khimiya, no. 3, 1966, 75-78

TOPIC TAGS: dissociation constant, organic sulfur compound

ABSTRACT: Among polyfunctional thiol-containing compounds, of great interest are vicinal thiols, which protect the animal body from ionizing radiation. One such compound is 1,2-dimercaptopropionic acid (DMPA). Since the activity of most SH-containing enzymes of the organism strongly depends on the degree of ionization of the thiol groups, an attempt was made to study the state in which DMPA exists under conditions prevailing in the body, i. e., at the physiological pH. The individual constants of DMPA were evaluated with the aid of a potentiometric titration of 1- and 2-mercaptopropionic acids. The values $pK'_1 = 3.75 \pm 0.05$, $pK'_2 = 10.60 \pm 0.02$ (1-mercaptopropionic acid) and $pK'_1 = 4.47 \pm 0.05$ and $pK'_2 = 10.31 \pm 0.03$ (2-mercaptopropionic acid) were obtained. Assuming the following ionization scheme for DMPA,

Card 1/2 UDC: 547.2/9

ACC NR: AP6031590



and considering the influence of the thiol groups in IMPA, the individual ionization constants of the latter were calculated: $pk_{13} = 9.78$, $pk_{12} = 9.65$, $pk_{132} = 10.31$ and $pk_{123} = 11.44$. Orig. art. has: 3 figures, 1 table and 5 formulas.

SUB CODE: 07/ SUBM DATE: 20Jul65/ ORIG REF: 003/ OTH REF: 009

Card 2/2

EWG(j)/EWT(m)

AP5011450

P.; Konopiyannikov, A

radioprotective agents, radiation

The authors' experiments seem to refute the view that radioprotective ... little or no value when low doses of ... protection the agents affect ... experimental animals. Their ex... simultaneously with the radioprotective ...

Card 1/2

[illegible] ted animals, regardless of the irradiation [illegible]
[illegible] of the total cell [illegible]

TARASENKO, A.G.; FEDOSEYEV, V.M.; SILAYEV,

2,3-Dimercaptopropylamine and its derivatives. Part 2: Synthesis of N-N-dialkyl-2,3-di(alkylthio)propylamines. Zhur. ob. khim. 34 no.7:2366-2369 Jl '64 (MIRA 17:8)

1. Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova.

FEDOSEYEV, V. O.

Ukrayins'kyy fizichnyy zhurnal, v. 8, no. 4, Apr 1963, 498-500. 15

S/185/63/008/004/015/015

A scientific conference devoted to problems of evaporation, combustion, and gas dynamics of dispersed systems was held at Odessa State University imeni I. I. Mechnikov from 1 to 6 October 1962. Sixty-five papers were presented, 24 of which dealt with the theory and practice of production and stability of aerosols and the effect on these processes of various physicochemical factors; the other 41 were working processes in combustion chambers of various power plants. Some of the titles were "Investigating oxidation processes of high hydrogenous fuels by oxygen from compressed air," S. S. Kramarenko; "Burning of metal suspension in hydrocarbon fuels," D. I. Polishchuk, L. P. Latonina, and V. L. Yankevich; and "Experimental investigation of two-phase flow in axially-symmetrical nozzles," G. A. Komov. Included also were discussions of the methods of solving equations of dissociating gas flow in ducts and gas dynamic calculations for jet engines, G. A. Varshavskiy, E. Ya. Guber, and A. P. Kisel'ov; the formation of plane shock waves in shock tubes and passage of shock waves through a flame front, D. V. Fedoseyev, G. D. Sadamandr, and I. K. Sevast'yanova; experimental results on the flow of combustion products of a methane-oxygen mixture around cambered surfaces with diffraction of detonation waves, L. G. Gvozd'eva; the stability of a steady-state flame front S. K. Aslanov; the relationship between the flame and the diameter of a burning drop, V. O. Fedoseyev; and theoretical and experimental investigation of burning of spherical metal particles, by L. A. Klyachko.

[AS]

Card 2/2

KRIKUNCHIK, A.B., inzh.; FEDOSEYEV, V.P., inzh.

Concerning the article "Networks for the auxiliary power supply of the self-needs of large condensing electric power plants." Elek. sta. 34 no.7:87-90 Jl '63. (MIRA 16:8)

FEDOSEYEV, V.S.

"Sanitary Improvement on Bird Farms, Unproductive Because of Tuberculosis."
Cand Vet Sci, Kazan' Veterinary Inst, Kazan', 1954. (RZhBiol. No 8, Apr 55)

SO: Sum.No. 704, 2 Nov 55 - Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (16).

FEDOSEYEV, V.S.

Eliminating tuberculosis among chickens on poultry farms. Veterinariia 33 no.9:26-30 S '56. (MLRA 9:10)

1.Dotsent Kazanskogo veterinarnogo instituta imeni N.E.Baumana.
(Tuberculosis in poultry)

F.

USSR/Microbiology - Microbes Pathogenic in Man and Animals.

Abs Jour : Ref Zhur - Biol., No 15, 1958, 67379

Author : Fedoseyev, V.S.

Inst : Kazan' Veterinary Institute.

Title : On the Problem of Intracutaneous Tuberculinization of Poultry.

Orig Pub : Uch. zap. Kazansk. vet. in-ta, 1957, 65, 181-187.

Abstract : No abstract.

Card 1/1

USSR/General Problems of Pathology. Allergy

U-2

Abs Jour : Ref Zhur - Biol., No 14, 1958, No 65936

Author : Abdullin Kh.Kh., Fedoseyev V.S.

Inst : Kazan Veterinary Institute

Title : Concerning the Effect of Repeated Intradermal Administration of Tuberculin on the Allergenic State in Tuberculous Hens

Orig Pub : Uch. zap. Kazansk. vet. in-ta, 1957, 65, 189-193

Abstract : No abstract

Card : 1/1

POLYAKOV, G.V.; TELESHEV, A.Ye.; FEDOSEYEV, V.S.; CHUVAKIN, V.S.

Methods for extracting micas from fine-grained rocks and small fractions for absolute age determinations. Geol.i geofiz. no.7: 99-101 '61. (MIRA 14:9)

1. Institut geologii i geofiziki Sibirskogo otdeleniya AN SSSR i Tomskiy politekhnicheskiy institut.
(Geological time)

Moscow. Universitet. Vestnik. Seriya 1 Matematika, Mekhanika, no. ..

TOPIC TAGS: incompressible flow theory, viscous fluid flow

ABSTRACT: Longitudinal flow of an incompressible fluid in a circular pipe of infinite length and having an infinitely long rod on its axis is studied. Velocity
friction on the axial rod
changes in the
move-
flow

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L 55125-65
ACCESSION NR: AP5009262

of the flow equation under conditions of periodic movement of the axial rod along
the pressure gradient. Orig. art. has: [illegible]

ASSOCIATION: Kafedra aeromekhaniki i gazovoy dinamiki (Department of aeromechanics and gas dynamics)

SUBMITTED: 06Mar64	ENCL: 00	SUB CODE: ME
NO REF SOV: 002	OTHER: 004	

Card 2/2

FEDOSEYEV, Ya.

An outstanding shift. Mast.ugl. 2 no.10:16 O '53. (MLRA 6:10)
(Coal mines and mining)

FEDOSEYEV, Ye., inzhener

One shift longwall coal mining with double-unit development face.
Mast.ugl.4 no.7:12-13 Jl'55. (MIRA 8:10)
(Coal mines and mining)

FEDOSEYEV, Ye., inzhener.

Four spindle boring machine. Mast. ugl. 4 no.10:20 O '55.
(Boring machinery) (MLRA 9:1)

FEDOSEYEV, Ye.

Useful invention. Mast.ugl. 8 no.6:10 Je '59. (MIRA 12:10)
(Coal mines and mining--Equipment and supplies)

FEDOSEYEV, Ye.N., inzh.; OSIPOV, G.L., kand.tekhn.nauk

Soundproofing materials and elements. Stroi. mat. 11 no.10:28-30 O '65. (MIRA 18:10)

FEDOSEYEV, YE.P.

FEDOSEYEV, P.A.; FEDOSEYEV, Ye.P.

New transit curves. Avt.dor.20 no.1:22-24 Ja '57. (MLRA 10:3)
(Curves in engineering)

L 52011-65 EWT(l) Pq-4 IJP(c)
ACCESSION NR: AP5012058

UR/0057/65/035/005/0914/0926

AUTHOR: Zalov, A.F.; Suzdalov, V.A.; Fedoseyev, Ye.P.

30
B
21

TITLE: Nonlinear investigation of spatial focusing in magnetic focusing prisms with inverse radius fields

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 35, no. 5, 1965, 914-926

TOPIC TAGS: electron optics, mass spectrograph, magnetic prism, magnetic field, magnetic separation

ABSTRACT: This paper gives a detailed discussion of the electron optics of a magnetic prism consisting of a sector (bounded by circular arcs passing through the symmetry axis) of an axially symmetric magnetic field, the strength of which, in the [illegible] is inversely proportional to the distance from the axis. Such [illegible] proposed by K.T.Bainbridge, R.Bender, and L.Lavatelli (K.Siegbahn, Beta- and Gamma-Ray Spectroscopy, p. 74, N.Y./Amsterdam, 1955) and have been discussed by J.Rozanka and collaborators (Chechosl. J. Phys., 686, 1960; 811, 1961; 101, 530, 1963). In the present paper vertical focusing and imaging of an extended source are discussed in addition to horizontal focusing and imaging of point and

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L 52011-65
ACCESSION NR: AP5012058

line sources, and the equations are put into a form suitable for design computations. The effect of the fringe field is not treated. A model has been constructed and its fringe fields measured; these measurements will be employed to calculate the effect of the fringe fields on ion beam focusing. Orig. art. has: 84 formulas and 4 figures.

ASSOCIATION: None

SUBMITTED: 20Jul64 ENCL: 00 SUB CODE: NP, EM

NR REF SOV: 002 OTHER: 003

Card 2/2

L 45920-66 EWT(1) IJP(c) AT

ACC NR: AF6028605 SOURCE CODE: UR/0057/66/036/008/1351/1356

AUTHOR: Malov,A.F.; Fedoseyev,Ye.P.

73
B

ORG: none

TITLE: Influence of the fringe field of a plane electrostatic capacitor on the focusing of charged particles

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 36, no. 8, 1966, 1351-1356

TOPIC TAGS: electron optics, electrostatic field, aberration, electric capacitor, CHARGED PARTICLE

ABSTRACT: The authors discuss the focusing of charged particles in the x-y plane of a rectangular Cartesian coordinate system x, y, z by the electrostatic field of two charged plates filling the half-planes $y = \pm h$, $x = 0$. The field obtained by the conjugate function (complex transformation) method is expanded about the x-axis in powers of y, terms of higher order than y^2 are neglected, and the differential equation of the trajectory is derived. The trajectory equation was solved by successive approximations for arbitrary initial conditions in the plane $x = -3.6h/\pi$ and the results are presented in the form of equations suitable for application to specific problems. Equations are given for the focal length of the fringe field, the lateral displacement of the focus, and the angular aberration. These quantities are calculated for a specific numerical case to illustrate the use of the equations. The

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ACC NR: AP6028605

equations can also be employed to calculate the effect of the fringe field of a cylindrical capacitor of the type frequently used in mass spectrometers and the like, provided the radius of the cylindrical capacitor is large compared with the distance between its plates. Orig. art. has: 30 formulas and 1 figure.

SUB CODE: 20 SUBM DATE: 03Jul65 ORIG. REF: 003 OTH REF: 003

Card 2/2 mjs

21 (1)

AUTHORS: Kirillov, P. L., Kuznetsov, V. A., Turchin, N. M., Fedoseyev, Yu. M. SOV/89-7-1-3/26

TITLE: Some Designs and the Operation of Pumps for Sodium and Alloys of Sodium With Potassium (Nekotoryye konstruktsii i ekspluatatsiya nasosov dlya natriya i splavov natriya s kaliyem)

PERIODICAL: Atomnaya energiya, 1959, Vol 7, Nr 1, pp 11 - 17 (USSR)

ABSTRACT: The following pumps are described: 1. A centrifugal pump which is able to lift the liquid 23 m at 990 rpm and 55 m at 1450 rpm. In the former case, the pump conveys 10 m^3/h. The greatest difficulty is caused by the correct selection of the material for ball bearings and sealing the rotating axis towards the exterior. The following material is recommended for the pump, a sectional drawing of which is given: For the hub: steel RF-1 and for the bearing box: beryllium bronze BrB2. The space between hub and bearing box amounted to 0.2 - 0.25 mm in a cold state. All other parts of the pump are made from steel of the type 1Kh18N9T. The pump is driven by an asynchronous electric motor. After 1500 hours of operation with a sodium-potassium alloy at temperatures of 200 - 400°C, the ball bearings were already used up. The greatest disadvantage of these pumps is

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the fact that e.g. the ball bearings are difficult to exchange, and that it is difficult to take off the sealing cylinder. The pump was developed under the supervision of G. V. Skladnev and V. D. Rostovtsev. 2. Centrifugal pump with beryllium bronze ball bearings and an ordinary electromotor. This pump, a sectional drawing of which is given, is distinguished by the fact that the electric motor is completely enclosed and is water-cooled. A noble gas circulates within the pump. Also in this case the question of ball bearings is of decisive importance; after numerous experiments, the materials were selected, which were used for the first-described pump. The pump was tested for 2000 hours with a sodium-potassium alloy, and 7000 hours with sodium alone, at a temperature of 200°C. Besides the ball-bearing problem, a second difficulty arises, viz. the fact that during operation sodium vapors penetrate into the casing of the electric motor, which destroy the insulation of the motor coiling by the formation of hydroxide. The pump described was developed under the supervision of M. N. Ivanovskiy. 3. Centrifugal pump with a ball-bearing made from "frozen" sodium. The pump shown in form of a sectional drawing conveys about 25 m^3

of liquid per hour 100 m high (2960 rpm). The power developed by the electromotor is 14 HP. The finish of the ball bearing, which, at the same time, seals the rotating shaft towards the outside, is shown separately in form of a sectional view. This bearing may be cooled by means of water. The sodium loss amounts to 1 - 2 g/24 hours. The pumps operate 2000 hours at 400 - 500°C, and remain in operation. The construction of these pumps is by V. I. Orlov. 4. Conductive electromagnetic single-phase pump for alternating current. By means of this pump it is possible to convey 4 m^3 of metal per hour, in which case a resistance of 2 kg/cm^2 may be overcome. The brands of wire necessary for the coils are listed separately. This type of pump should be used only if small quantities are to be conveyed. The pump, which is shown by a figure, was constructed under the supervision of N. M. Turchin. 5. Electromagnetic induction pump. This pump consists of two parallel inductors between which there is a channel, through which the liquid metal is able to flow. The indentations of the inductors contain an 8-pole three-phase winding, which may be cooled by means of copper tubes, through

which water flows. The width of the channel is 150 mm, and its height in the case of one pump is 6.1 and in the case of the other 8.7 mm. In the interior of the channel copper elements are located at the same height as the ends of the inductors, which are the short-circuit rings for the rotor of the asynchronous motor. The pumps have been in operation for a long time at temperatures of 200 - 250°C (conveying output 30 m^3/h). I. A. Tyutin distinguished himself particularly in the course of the construction of this type of pump. There are 7 figures and 7 references, 3 of which are Soviet.

SUBMITTED: February 10, 1959

FEDOSEYEVA, A. A.

"Recent Developments in Bee Culture," Dost. sel'Khoz., No.7, 1952

FEDOSEYEVA, A.G.

Experience in holding interdistrict conferences of midwives and gynecologists. Zdrav. Turk. 2 no.4:6-8 Jl-Ag '58. (MIRA 12:6)

1. Glavnyy vrach Chardzhouskogo oblastnogo rodil'nogo doma.
(CHARDZHOU PROVINCE--OBSTETRICS)

FEDOSEYEVA, A. I.

"Albedo of the System Earth— Atmosphere and its Distribution Over the Terrestrial Globe"
Tr. Gl. Geofiz. Observatorii, No 41, 133-143, 1953

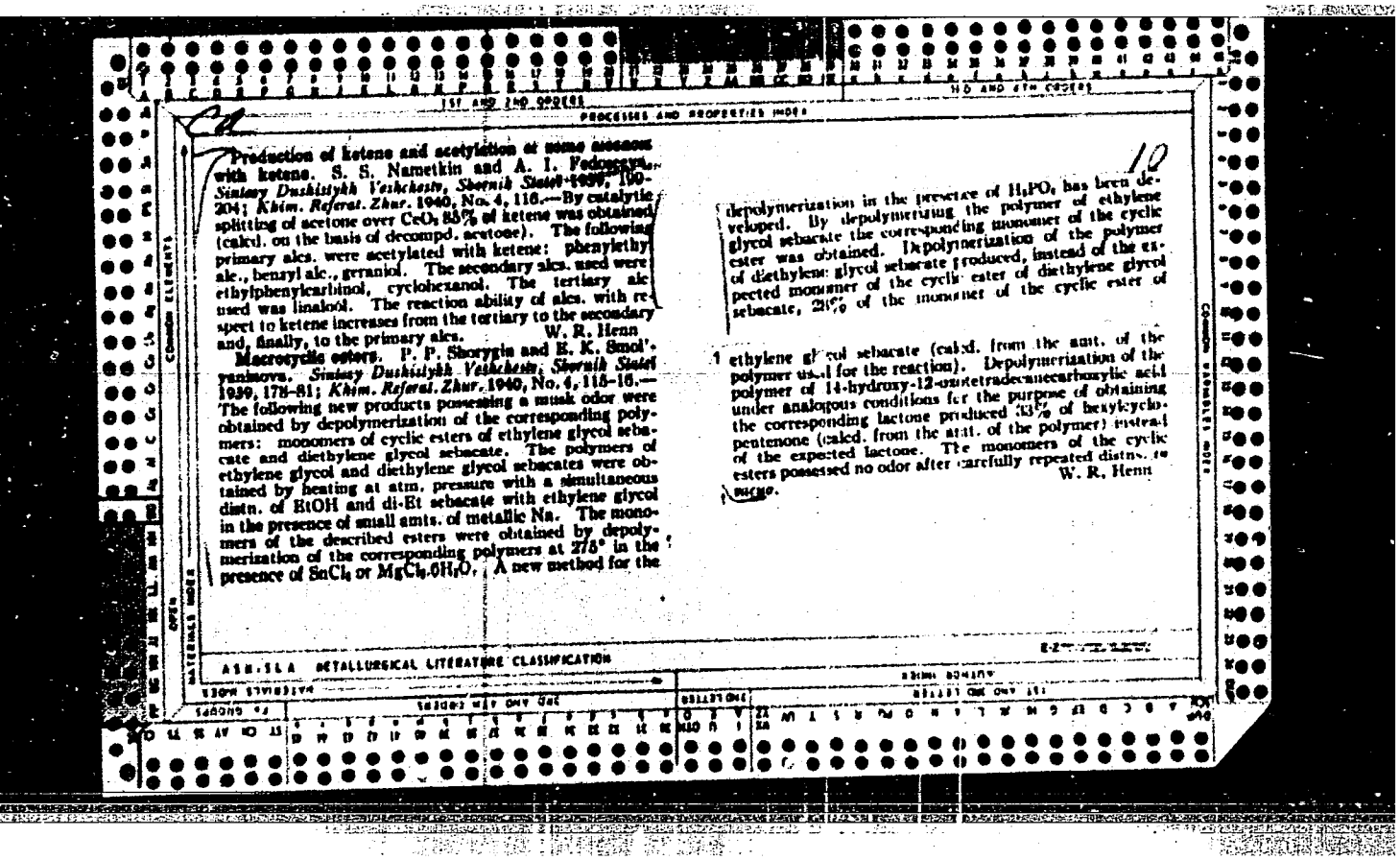
The author presents (in the form of tables and charts) the distribution of computed values of the albedo of the earth-atmosphere system over the surface of the terrestrial globe for January, February, July and August, and also the mean yearly values. The general values found for the albedo of the earth as a planet turned out to equal 41%. In the computations, she took into consideration the albedo of the underlying surface, clouds, reflection, etc. (RZhGeol, No 3, 1954)

SO: W-31187, 8 Mar 55

FEDOSEYEVA, A. I.

Dynamics of weed infestation of crops under irrigation as judged from experiments on the "Svobodnyi Mai" Collective Farm, Gremyach'-ye District, Voronezh Province. Trudy VGU 56 no.11:75-91 '59. (MIRA13:8)

(Gremyach'ye District--Weeds)
(Irrigation farming)

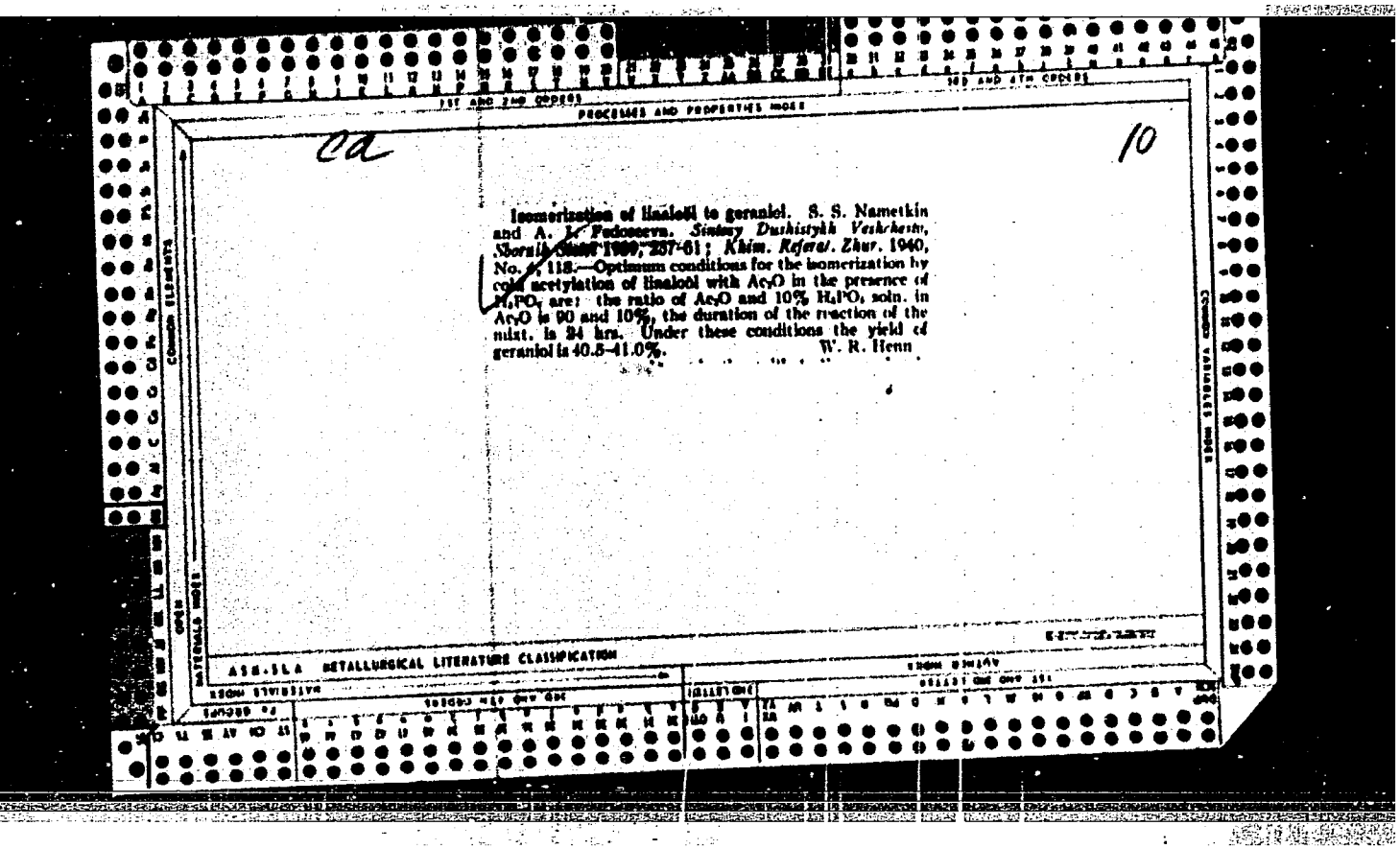


Production of ketene and acetylation at some aliphatic alcohols with ketene. S. S. Nametkin and A. I. Fedoseyeva. *Sintezy Dushistykh Veshchestv, Sbornik Statei* 1939, 190-204; *Khim. Referat. Zhur.* 1940, No. 4, 116.—By catalytic splitting of acetone over CeO_2 85% of ketene was obtained (calcd. on the basis of decompd. acetone). The following primary alcs. were acetylated with ketene: phenylethyl alc., benzyl alc., geraniol. The secondary alcs. used were ethylphenylcarbinol, cyclohexanol. The tertiary alc used was linalool. The reaction ability of alcs. with respect to ketene increases from the tertiary to the secondary and, finally, to the primary alcs. W. R. Henn

Macrocyclic esters. P. P. Shorygin and E. K. Smol'yaninova. *Sintezy Dushistykh Veshchestv, Sbornik Statei* 1939, 178-81; *Khim. Referat. Zhur.* 1940, No. 4, 115-16.—The following new products possessing a musk odor were obtained by depolymerization of the corresponding polymers: monomers of cyclic esters of ethylene glycol sebacate and diethylene glycol sebacate. The polymers of ethylene glycol and diethylene glycol sebacates were obtained by heating at atm. pressure with a simultaneous distn. of EtOH and di-Et sebacate with ethylene glycol in the presence of small amts. of metallic Na. The monomers of the described esters were obtained by depolymerization of the corresponding polymers at 275° in the presence of $SnCl_4$ or $MgCl_2.6H_2O$. A new method for the depolymerization in the presence of H_3PO_4 has been developed. By depolymerizing the polymer of ethylene glycol sebacate the corresponding monomer of the cyclic ester was obtained. Depolymerization of the polymer of diethylene glycol sebacate produced, instead of the expected monomer of the cyclic ester of diethylene glycol sebacate, 20% of the monomer of the cyclic ester of

10

1 ethylene glycol sebacate (calcd. from the anal. of the polymer used for the reaction). Depolymerization of the polymer of 14-hydroxy-12-oxotetradecanecarboxylic acid under analogous conditions for the purpose of obtaining the corresponding lactone produced 33% of hexylcyclopentenone (calcd. from the anal. of the polymer) instead of the expected lactone. The monomers of the cyclic esters possessed no odor after carefully repeated distns. W. R. Henn



Cd

10

Isomerization of linaloöl to geraniol. S. S. Nametkin and A. V. Fedoseeva. *Sintezy Dushistykh Veshchestv, Sbornik Statei* 1939, 237-61; *Khim. Referat. Zhur.* 1940, No. 6, 118.—Optimum conditions for the isomerization by cold acetylation of linaloöl with Ac_2O in the presence of H_3PO_4 are: the ratio of Ac_2O and 10% H_3PO_4 soln. in Ac_2O is 90 and 10%, the duration of the reaction of the mixt. is 24 hrs. Under these conditions the yield of geraniol is 40.8–41.0%. W. R. Henn

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

FEDOSEYEVA, A. I., MILLER, B. V. and NEYMAN, M. B.

"A New Method for the Determination of Solubility with the Aid of Radioactive Indicators", Dokl AN SSSR, (Novaya Seriya), Vol. LXXV, No. 5, pp 719-721, 1950.

Inst Phys Chem, Acad Sci USSR

SO: W-17381, 16 Mar 1951

NEYMAN, M. B., TORSUEVA, Ye. S., FEDOSEEVA, A. I., SHANTAROVICH, P. S.

Hyposulfites

Investigation of the reaction in the formation of thiosulfate from H_2S and SO_2 using radioactive sulfur. Dokl. AN SSSR 86 no. 2, 1952.

9. Monthly List of Russian Accessions, Library of Congress, December 1952, Uncl.

SEREBRENNIKOV, Innokentiy Mikhaylovich; FEDOSEYEVA, A.N., red.; MIRONOVA, A.M., tekhn. red.

[Forensic medical study of skin scars] Sudebnomeditsinskoe issledovanie rubtsov kozhi. Moskva, Medgiz, 1962. 125 p. (MIRA 15:4)

(CICATRICES) (MEDICAL JURISPRUDENCE)

CA FEDOSEYEVA, A.S.

4

Irreversible electrode potentials in hydrofluoric acid solutions. M. M. Kuriepov and A. S. Fedoseeva (Inst. Phys.-Chem., Acad. Sci. U.S.S.R., Moscow). *Doklady Akad. Nauk S.S.S.R.* 75, 863-4(1950).—Potentials *E* of 25 metals were measured in 0.01, 0.1, and 1 *N* soln. of HF over 24 hrs. The initial *E* of metals of the 1st, 6th, and 8th groups (Cu, Ag, Au, Cr, Se, Mo, Te, W, Fe, Ni, Pd, Pt) were pos., those of the other metals (Mg, Zn, Cd, Al, Ga, In, Tl, Si, Pb, Nb, Sb, Bi, Mn) were neg. relative to the H electrode. The initial and final *E* of Au, Ga, In, and Pd, were neg., and *E* of Mg, Al, Si, Cr, Mn, Fe, and Ni, were pos. relative to the region of reversible potentials. For the other metals, *E* was close to the equil. potential. Marked changes of *E* with time were observed with Au, Mg, Al, Nb, Sb, Mn, Fe, Pd, Pt, and the metals of the 6th group. The concn. of HF showed no significant effect on *E*.

N. Thon

BAGAYEVA, G.G.; BLYUMBERG, I.B.; FEDOSEYEVA, A.S.

Spray dyeing of matrices in the inbibition method of processing color films. Trudy LIKI no. 5:219-224 '59. (MIRA 13:12)

1. Kafedra obshchey fotografii i tekhnologii obrabotki plenki Leningradskogo instituta kinoinzhenerov.
(Color photography--Printing processes)

SOV/20-121-4-20/54

AUTHORS: Berlin, A. A., Stupen', L. V., Fedoseyeva, B. I., Yanovskiy, D. M.

TITLE: An Investigation of the Initiated Copolymerization of Vinyl Chloride With Derivatives of the Methacryl Series (Issledovaniye privitoy sopolimerizatsii vinilkhlorida s proizvodnymi metakrilovogo ryada)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol. 121, Nr 4, pp. 644 - 647 (USSR)

ABSTRACT: If a monomer is polymerized in the presence of polymeric substances it is often subjected to the influence of the radicals of growing chains or of the initiator. In this connection it is possible that as a result of chain transfer active centers are formed on the macromolecules. These centers are able to initiate the polymerization of the monomer resulting in the formation of compounds of high molecular weight with a racemic or threedimensional structure. In case that the side ramifications are of different chemical nature than the main chain, inoculated copolymers form. They combine the properties of the polymers used for the reaction

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(Refs 1-6). This paper gives experimental results on synthesis and investigation of the inoculated polymers which are formed by the polymerization of vinyl chloride in the latex of the copolymer of butyl methacrylate and methacrylic acid (henceforth both referred to as BMA). Further results are mentioned of those polymers forming by the polymerization of a butyl methacrylate- and methacrylic acid mixture in the polyvinyl chloride (PVCh) latex. As table 1 shows the Khaggins constants are higher in the case of inoculated polymers than in the case of linear control polymers. This fact points to a ramification due to the formation of side chains. The mentioned constants of the PVCh- end BMA mixtures are between the constants of individual polymers and are close to the additive values. More than 60% of the monomer enters the reaction with the polymer (coefficient f). Furthermore the polymer solutions were turbodimetrically titrated in dioxane or in a mixture of dimethyl formamide with acetone. Figure 1 shows that a separate precipitation takes place when a mixture of polymers is titrated, whereas the curve of precipitation of polymerizate sample of vinylchloride

in the BMA latex refers to the existence of an inoculated copolymer. Table 2 shows that the increase of the amount of vinylchloride in the mixture of components elevates the yield-(utilization)coefficient f. The addition of a regulator (CCl_4, CHJ_3) abruptly reduces the yield of the inoculated copolymer in consequence of the inactivation of a part of the macroradicals. At the end thermochemical properties and further details of production are mentioned. There are 4 figures, 2 tables, and 8 references, 6 of which are Soviet.

PRESENTED: April 3, 1958, by N.N.Semenov, Member, Academy of Sciences, USSR

SUBMITTED: April 1, 1958

ZAKHAROV, L.N.; NESTEROV, V.S.; FEDOSEYEVA, E.G.

Effect of surface waves on the propagation of sound in a shallow fresh-water reservoir. Akust. zhur. 9 no.2:234-236 '63. (MIRA 16:4)

1. Kafedra akustiki Moskovskogo gosudarstvennogo universiteta.
(Underwater acoustics)

ZAKHAROV, L.N.; NESTEROV, V.S.; FEDOSEYEVA, E.G.

Slow fluctuations of an acoustic field under the action of a shallow freshwater basin. Akust. zhur. 10 no.3:293-300 '64. (MIRA 17:11)

1. Kafedra akustiki Moskovskogo gosudarstvennogo universiteta.

SOKHRINA, Raisa Fedorovna, nauchnyy sotrudnik; CHELPANOVA, Ol'ga Mikhaylovna, kand.geogr.nauk; SHAROVA, Valeriya Yakovlevna, kand.geogr. nauk. Prinimali uchastiye: RUBINSHTEYN, Ye.S., prof.; DROZDOV, O.A., prof., doktor geograf.nauk, red.; PRIK, Z.M.; PISAREVA, G.P., nauchnyy sotrudnik; GALINA, M.B.; KOSENKOVA, Z.D.; TIKHOMIROVA, N.A.; FEDOSEYEVA, G.N., POKROVSKAYA, T.V., kand.geograf. nauk, red.; PISAREVSKAYA, V.D., red.; VOLKOV, N.V., tekhn.red.

[Air pressure, air temperature and atmospheric precipitation in the Northern Hemisphere] Davlenie vozdukha, temperatura vozdukha i atmosfernye osadki severnogo polushariia. Pod red. O.A.Drozdova i T.V.Pokrovskoi. Leningrad, Gidrometeor.izd-vo, 1959. 473 p. [___Atlas of charts] Atlas kart. (MIRA 13:4)
(Meteorology--Charts, diagrams, etc.)

AUTHORS: Zil'berman, Ye. M., Fedoseyeva, G. T. SOV/64-58-6-13/15

TITLE: On the Separation of Adiponitrile Obtained From Products of the Reaction Between Adipic Acid and Ammonia (O vydelenii adiponitrila iz produktov vzaimodeystviya adipinovoy kisloty i ammiaka)

PERIODICAL: Khimicheskaya promyshlennost', 1958, Nr 6, pp 377-379 (USSR)

ABSTRACT: One of the methods used for the industrial production of adiponitrile is the synthesis obtained from adipic acid and ammonia producing a heterogeneous mixture (Ref 1). Adiponitrile obtained in such a way is mostly dissolved in water. It is stated that the aromatic carbohydrates are a good extracting agent for adiponitrile since they do not react with it and have a relatively high steam pressure and specific weight. In order to study these possibilities of extraction analyses were, in the present case, carried out with the systems water-adiponitrile-benzene, water-adiponitrile-toluene, and water-adiponitrile-$(NH_4)_2SO_4$. Since good results can also be obtained by salting out the aqueous adiponitrile solutions, the analyses were carried out in the latter system. In a few cases the water content of the oil layer was determined by means of

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the Fischer reagent (Ref 10). The comparison of the extractability of some carbohydrates is illustrated graphically on the basis of the data of the distribution of adiponitrile between water and the solvent. It appears from this that the introduction of a methyl-substitute into the benzene-ring reduces the concentration ratio of adiponitrile between the oil and the aqueous layer. The extractability decreases in the following order: benzene, toluene, ortho-xylene . On the basis of the observations made it is assumed that an extraction in the presence of inorganic salts would be especially effective. There are 5 figures, 1 table, and 10 references, 4 of which are Soviet.

5(1)

AUTHORS: Shevlyakov, A. S., Etlis, V. S., Minsker, K. S., Degtyareva, L. M., Fedoseyeva, G. T., Kucherenko, M. M.

SOV/20-122-6-34/49

TITLE: Preparation of Isotactic Polystyrene (Polucheniye izotaktícheskogo polistirola)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 122, Nr 6, pp 1076-1078 (USSR)

ABSTRACT: Inspite of several papers (Refs 1-3) the preparation method and the parameter of isotactic polystyrene are not described in publications. The present paper tries to determine the conditions of stereospecific styrene polymerization which are suited for technological development. The styrene polymerization was produced with a catalytic system of triethyl aluminium titanium trichloride in the medium of saturated hydrocarbons at 30-120° in a nitrogen atmosphere. A dependence of the polymerization velocity and the yield of isotactic fraction of the polymer on the concentration of $Al(C_2H_5)_3$ in the solvent (benzine) was found (Table 1). Figure 1 shows the dependence of the yield of the isotactic fraction (fraction III.), of the per cent content of the

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amorphous fraction in the polymer (1st fraction), of the characteristic viscosity (in cyclohexanone at 20°) and of the density (ρ) on the quantity K. Figure 2 shows the yield of the isotactic and amorphous fraction in the polymer in dependence on temperature. An increase in the entire yield of polystyrene takes place only in consequence of an increase in the yield of the amorphous fraction. When the relation $C_8H_8 : TiCl_3$ was raised from 10 to 15, the content of the amorphous fraction in the polymer increased by 1.5-2.0 times. The yield of the isotactic fraction per $TiCl_3$-unit practically did not change. The results of typical tests are collected in table 2. Obviously the formation of the amorphous product is not connected with surface effects and takes place in a homogeneous solution according to the ion mechanism. The constant yield of an isotactic product, however, must be explained by the constant size of the active surface of the catalyst. Polystyrene can be prepared according to the system described, depending on the conditions of the procedure and the polymerization method either as a completely crystalline substance (98.5-100 %) or with a considerable content of the

amorphous fraction. Figure 3 shows typical thermodynamic curves (plotted with Kargin's scales) of an industrial sample, of the polymer prepared according to the catalytic system mentioned above, and of its individual fractions. Figure 4 gives the radiographs of both fractions. Table 3 shows some physico-mechanic and electric properties of the polystyrene under consideration. V. A. Kargin, Member, Academy of Sciences, USSR assisted the author in his work. There are 3 figures, 3 tables, and 3 references.

PRESENTED: June 27, 1958, by V. A. Kargin, Academician

SUBMITTED: June 26, 1958

RAZUVAYEV, G.A.; MINSKER, K.S.; FEDOSEYEVA, G.T.; SAVEL'YEV, L.A.

Effect of amines on the stereospecific polymerization of propylene.
Vysokom.soed. 1 no.11:1691-1695 N '59. (MIRA 13:5)
(Propene) (Amines)

FEDOSEYEVA, G.T.

S/064/60/000/005/003/009
B015/B059

AUTHORS: Shevlyakov, A. S., Etlis, V. S., Minsker, K. S., Bugiyareva, L. M., Fedoseyeva, G. T., Kuchrenko, M. M.

TITLE: Stereospecific Polymerization of Styrene

PERIODICAL: Khimicheskaya promyshlennost', 1960, No. 5, pp. 10 - 15

TEXT: In the paper under review, details on the stereospecific polymerization of styrene are discussed and experimental results are mentioned in connection with a previous report (Ref. 11) on the production of isotactic polystyrene by means of a catalytic system consisting of triethyl aluminum and $TiCl_3$. The α-form of $TiCl_3$, showing a high stereospecificity, was used in the experiments. It was established that the yield of styrene isomers (of the amorphous and isotactic fractions) depends on the dilution of the reaction mixture (Table 1) and work was conducted with a concentration of from 7 to 10% triethyl aluminum. Reducing the relative amount of triethyl aluminum impairs the stereospecificity and increases the yield of the amorphous product. An increase

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of the molar ratio of triethyl aluminum to $TiCl_3$ above 1 : 1 at a concentration of the former of 7% and an experimental temperature of 90° and 120°C leads to increased formation of amorphous fraction, but it does not change the yield of isotactic fraction (Table 2). Temperature (with variations of from 60° to 150°C) exerted a marked influence on the yield of amorphous fraction, but not on that of the isotactic fraction. The following polymerization conditions are recommended: concentration of triethyl aluminum in the solution: 5.0-7.0%, molar ratio between triethyl aluminum and $TiCl_3$ = 1 : 1, weight ratio between styrene and $TiCl_3$ = 12-20 : 1, reaction temperature 90-150°C, duration of reaction 3-5 hours. The properties of polystyrene obtained in the stereospecific synthesis are finally discussed and the advantages of the crystalline product (Table 3) are pointed out. There are 3 figures, 3 tables, and 20 references: 6 Soviet, 5 US, 2 British, 2 German, 4 Italian, and 1 Japanese.

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SHEVLYAKOV, A.S.; ETLIS, V.S.; MINSKER, K.S.; DEGTYAREVA, L.M.; FEDOSEYEVA, G.T.; KUCHERENKO, M.M.

Stereospecific polymerization of styrene. Khim.prom. no.5:362-367 Jl-Ag '60. (MIRA 13:9)
(Styrene) (Polymerization)

81583

S/190/60/002/03/05/014
B020/B066

5.3831

AUTHORS: Razuvayev, G. A., Minsker, K. S., Fedoseyevn, G. T., Bykhovskiy, V. K.

TITLE: Effect of Polar Additions on the Stereospecific Polymerization of Propylene

PERIODICAL: Vysokomolekulyarnyye soyedineniya, 1960, Vol. 2, No. 3, pp. 404-407

TEXT: The authors have recently shown that the addition of amines in the stereospecific polymerization and in the presence of a catalyst system (consisting of titanium chloride and triethyl aluminum) changes the degree of polymerization of polymers. The ratio of the fractions is not considerably influenced. The effect of other types of nucleophilic compounds containing an undivided electron pair that may interact both with the unoccupied 3-p level of the central Al atom in triethyl aluminum and with the d-shell of $TiCl_3$ is of special interest in this connection. It was presupposed that these compounds, like the amines

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(Ref. 1), exert an influence upon the ratio of the reaction of growth to the interruption of the chain. Representatives of the class of ethers (dioxane), sulfides (diphenyl sulfide), and of the heterocyclic compounds (pyridine, thianthrene) were selected. The results of experiments on the effect of these compounds on the stereospecific polymerization of propylene are given (Table). With an increasing ratio between addition and titanium chloride also the molecular weight of the polymer increases as much as on application of amines. The maximum molecular weight found in dioxane with a ratio of < 1 between addition and titanium chloride is to be explained by the presence of two electron donor atoms in its molecule. Dioxane and pyridine accelerated stereospecific polymerization, which had not been expected by the authors (Fig.). The authors outlined (Ref. 1) the possibility of the formation of complex compounds between $TiCl_3$ and aniline, dimethyl aniline, and triethyl aniline in the presence or absence of triethyl aluminum. This may also be compared with the effect of the increasing molecular weight of the resultant polymer on polymerization of the Ziegler type and in the presence of ether additions. T. A. Domracheva

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contributed to the experimental part. Mention is made of C. D. Nenițescu (Ref. 3), A. V. Topchiyev and co-workers (Refs. 4,5), V. Michovich and M. Mikhaylovich (Ref. 12), T. V. Talalayeva and K. A. Kocheshkov (Ref. 8). There are 1 figure, 1 table, and 19 references: 10 Soviet, 8 US, 2 German, and 1 Rumanian.

SUBMITTED: December 11, 1959

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S/190/62/004/010/006/010
B101/B186

AUTHORS: Razuvayev, G. A., Minsker, K. S., Fedoseyeva, G. T.

TITLE: Heterogeneous catalytic polymerization of ethylene in the presence of $TiCl_3$ + Al + $AlCl_3$ or $TiCl_3$ + (Al + HCl)

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 4, no. 10, 1962, 1495-1502

TEXT: Polyethylene (PE) and ethylene were synthesized at 60°C and a pressure of 10 atm in different solvents to obtain more exact data on the polymerization of ethylene with a catalyst suggested by K. Fukui et al. (J. Polymer Sci., 37, 341, 1959; ibid., 37, 353, 1959). The system $TiCl_3$ + Al + $AlCl_3$ was very active, whereas its components alone or paired did not form PE. $TiCl_3$ + Al which yields small amounts of PE, is an exception. For the first time, the activity of the catalyst was found to depend on the type of solvent (Fig. 1). The catalyst system is assumed to form a catalytically effective complex with the solvent, where $AlCl_3$ acts

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as activator of the Al surface and of $TiCl_3$ and forms complexes with aromatic hydrocarbons. Hence, the catalytic effect of the system $TiCl_3$ + (Al + HCl) was tested, with Al having been treated with anhydrous HCl in an aromatic or saturated hydrocarbon medium. Treatment of Al with HCl in benzene yielded a yellowish brown $AlCl_3$ deposit which, without $TiCl_3$, was a highly active catalyst of alkylation. Benzene yielded considerable amounts of hexaethylene benzene. An addition of $TiCl_3$ caused the formation of PE. The complex thus formed, excludes structures causing alkylation of aromatics. The effectiveness of the system $TiCl_3$ + (Al + HCl) depended on the contact time of the components before the reaction. After a contact time of 0.5 hrs, the ratio PE : hexaethyl benzene was 4 : 110, after 24 hrs 11 : 70, after 90 hrs 75 : 3, and after 120 hrs 350 : 0. $TiCl_3$ + (Al + HCl) was more active than $TiCl_3$ + Al + $AlCl_3$, its presence intensified the ethylene adsorption. After an addition of $TiCl_3$, Al activated with HCl in n-heptane, did not yield PE which was only obtained

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when benzene was used for the activation, and the system was suspended in n-heptane. Both systems yielded PE with m.p. = 120 - 135°C and with physicomechanical properties consistent with those of PE produced with Ziegler catalysts. The active centers of polymerization are on the metal surface on which $TiCl_3$ is deposited. Micro- and macroformations, fibrils, spherolites, etc were observed under the polarization microscope. There are 5 figures and 3 tables.

SUBMITTED: June 10, 1961

Fig. 1: Yield of PE versus time when different solvents are used.
(1) Benzene; (2) chloro benzene; (3) toluene; (4) o-xylene; (5) cyclohexane; (6) p-dichloro benzene; (7) n-heptane.
legend: (a) polymer yield; (b) time, hrs.

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L 13545-63 EWP(j)/EPF(c)/EWT(m)/BDS AFFTC Pc-4/Pr-4 RM/WW
ACCESSION NR: AP3000689 S/0190/63/005/005/0655/0658 67
66

AUTHOR: Minsker, K. S.; Fedoseyeva, G. T.; Razuvayev, G. A.

TITLE: The role of the hetero-component in stereospecific polymerization on Ziegler-Natta catalysts

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 5, no. 5, 1963, 655-658

TOPIC TAGS: catalytic activity, hetero-component, stereospecific polymerization, activation of bonds, styrene, TiCl sub 3, CrCl sub 3, propylene, ethylene

ABSTRACT: The present work was carried out because of the scarcity of information on the catalytic performance of the alpha-modification of TiCl sub 3 and the purple and pink modification of CrCl sub 3 in initiating the polymerization of ethylene, propylene, and styrene. The polymerization of ethylene was conducted in metallic reactors, four liters in capacity, that of propylene and styrene in ampules. A nonstereospecific polymerization was obtained, accompanied by the formation of low-molecular reaction products, confirmed by an electronogram. The theory is advanced that activation of the double bond occurs on chemisorption of the monomer by the active heterogeneous catalyst centers. The doubling of the yield in the presence of benzene lends support to this theory. Orig. art. has: 1 table and 1 figure.

Card 1/2 Association: Scientific-Research Inst. of Chemistry, Gorkiy St. Un.

RAZUVAYEV, G.A.; MINSKER, K.S.; FEDOSEYEVA, G.T.; SHTARKMAN, B.P.

Heterogeneous catalytic polymerization of ethylene in the presence of the metal - metal chloride system. Vysokom.soed. 5 no.9:1371-1375 S '63. (MIRA 17:1)

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